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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,388	12/15/2003	Paul J. Richter	58230US002	6222

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EXAMINER.

NGUYEN, KIMNHUNG T

ART UNIT PAPER NUMBER

2629

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/05/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/736,388

Applicant(s)

RICHTER ET AL.

Examiner

Kimnhung Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/9/04, 8/15/05</u> . | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This application has been examined. The claims 1-37 are pending. The examination results are as following.

#### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-15 and 20-37 are rejected under 35 U.S.C. 102(b) as being anticipated by Badders, Jr. (US 6,305,073 cited by applicant).

As to claim 1, Badders, Jr. discloses in fig. 2, a touch sensor comprising:

a sensor substrate (28) covering a touch sensitive area, the touch sensitive area configured to receive a touch input applied to the touch sensitive area from a front side of the touch sensor;

a sensing electrode (top membrane 14) disposed on the sensor substrate in the touch sensitive area;

a self-supporting dielectric substrate (21) covering a border area, the border area being outside the touch sensitive area, the dielectric substrate being disposed between the sensing electrode and the front side of the touch sensor; and

a plurality of auxiliary electrodes (30A-30B, 34A-34B) disposed on the self-supporting dielectric substrate in the border area, the touch sensor generating a touch signal in the sensing electrode in response to the touch input applied to the touch

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sensitive area from the front side of the touch sensor, the auxiliary electrodes transmitting the touch signal to electronics configured to use the touch signal to determine the touch location (see col. 4, lines 41-56).

As to claim 2, Badders, Jr. discloses further, wherein a portion of the plurality of auxiliary electrodes is disposed on a first side of the self-supporting dielectric substrate and another portion of the auxiliary electrodes is disposed on a second side of the self-supporting dielectric substrate (see fig. 2).

As to claim 3, Badders, Jr. discloses further, the touch sensor comprising a field linearization pattern disposed along the perimeter of the touch sensitive area (because the touch system always has a field pattern disposed along the perimeter of the touch area).

As to claim 4, Badders, Jr. discloses further, a cover layer disposed on the self-supporting dielectric substrate (see spacer 20 and membrane 14 made of polyester film (see col. 6, lines 30-35)).

As to claim 5, Badders, Jr. discloses further, wherein the cover layer comprises glass (see col. 6, lines 30-35).

As to claim 6, Badders, Jr. discloses further, the touch sensor, wherein the cover layer is self-supporting (see col. 6, lines 30-35).

As to claim 7, Badders, Jr. discloses further, wherein the cover layer is flexible (because Badders, Jr. discloses the membrane 14 made of polyester film, see col. 6, lines 30-35).

As to claim 8, Badders, Jr. discloses further, wherein the cover layer is rigid (see col. 5, lines 41-46).

As to claim 9, Badders, Jr. discloses further, wherein the self-supporting dielectric

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substrate comprises glass (see col. 6, lines 30-35).

As to claim 10, Badders, Jr. discloses further, wherein the self-supporting dielectric substrate is flexible (see col. 6, lines 30-35).

As to claim 11, Badders, Jr. discloses further, wherein the self-supporting dielectric substrate comprises one aperture (24, see col. 4, lines 25-30).

As to claim 12, Badders, Jr. discloses further the touch sensor, wherein the aperture (24) extends across the touch sensitive area.

As to claim 13, Badders, Jr. discloses further the touch sensor, wherein the one aperture (24) is covered by the touch sensitive area.

As to claim 14, Badders Jr. discloses further, wherein the sensing electrode (14) comprises a Metal oxide (see col. 5, lines 51-55).

As to claim 15, Badders Jr. discloses further the touch sensor, wherein the metal oxide comprises Indium Tin Oxide (51-55).

As to claim 20, Badders, Jr. discloses further the touch sensor system comprising a display viewable through the touch sensor (because the touch screen should have a display for viewable through the touch sensor).

As to claim 21, Badders, Jr. discloses further the touch sensor configured to be a capacitive touch sensor (see fig. 2)

As to claim 22, Badders, Jr. discloses further, comprising an electrically insulating layer disposed on the auxiliary electrodes (see conductive epoxy material 41, see fig. 7B).

As to claim 23, Badders, Jr. discloses further, comprising an electrically

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conductive layer (43) disposed on the electrically insulating layer.

As to claim 24, Badders, Jr. discloses further, wherein the electrically conductive layer is electrically isolated from the auxiliary electrodes (see col. 9, lines 64-67, and col. 10, lines 1-11).

As to claim 25, Badders Jr. discloses further, wherein the plurality of auxiliary electrodes are electrically connected to the sensing electrode (see figs. 1,2).

As to claims 26, 27, Badders Jr. discloses, further comprising an electrically conductive shielding electrode (43) disposed on the sensor substrate and opposite the sensing electrode (see col. 9, lines 13-19).

As to claim 28, Badders Jr. discloses further, wherein the self-supporting dielectric substrate (21) has one or more protruding sections (see fig. 2).

As to claim 29, Badders, Jr. discloses the touch sensor of claim 28, wherein the one protruding section electrically connect one or more of the plurality of auxiliary electrodes to the electronics (fig. 1).

As to claim 30, Badders, Jr. discloses further, wherein the one or more protruding Sections electrically connect one or more of the plurality of auxiliary electrodes to the electrically conductive shielding electrode (fig. 1,2).

As to claim 31, Badders, Jr. discloses in fig. 2, a capacitive touch sensor comprising:

a sensor substrate (28) covering a touch sensitive area, the touch sensitive area configured to receive a touch input applied to the touch sensitive area;

a sensing electrode (14) disposed on the sensor substrate in the touch sensitive area;

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a self-supporting dielectric substrate (21) covering a border area, the border area being outside the touch sensitive area; and

a plurality of auxiliary electrodes (30A, 30B, 34A, 34B) disposed on the dielectric substrate in the border area, the touch sensor generating a touch signal in response to a capacitive coupling between the touch sensor and the touch input applied to the touch sensitive area, the auxiliary electrodes transmitting the touch signal to electronics configured to use the touch signal to determine the touch location.

As to claim 32. The capacitive touch sensor of claim 31, wherein the self-supporting dielectric substrate comprises one aperture (similar claim 11).

As claim 33, Badders, Jr. discloses further, wherein the one aperture extends across the touch sensitive area (similar claim 12).

As to claim 34, Badders, Jr. discloses the capacitive touch sensor of claim 32, wherein the one aperture is covered by the touch sensitive area (similar claim 13).

As to claim 35, Badders, Jr. discloses, further comprising an electrically insulating layer disposed on the auxiliary electrodes (similar claim 22).

As to claim 36, Badders, Jr. discloses further comprising an electrically conductive layer disposed on the electrically insulating layer (similar claim 23).

As to claim 37, Badders, Jr. discloses further wherein the electrically conductive layer is electrically isolated from the auxiliary electrodes (similar claim 37).

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4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Badders, Jr. (US 6,305,073).

As to claims 16, 17, Badders, Jr. does not disclose that wherein the metal oxide comprises Tin Antimony Oxide, or fluorine doped tin oxide.

It would have been obvious to one of ordinary skill in the art to have the metal oxide comprises Tin Antimony Oxide, or fluorine doped tin oxide as claimed because Badders, Jr. discloses the metal oxide comprises Indium Tin, and which is the same group of Tin Antimony Oxide and fluorine doped tin oxide.

As to claims 18, 19, Badders, Jr. does not disclose that the sensing electrode comprises an organic conductor and comprises a conductive polymer.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the sensing electrode comprises an organic conductor and comprises a conductive polymer because Badders, Jr. discloses that the sensing electrode (14) to maintain the x-axis electrodes 34A, 34B in electrical contact with lower conductive surface (18, see col. 5, lines 7-10).



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*Correspondence*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimnhung Nguyen whose telephone number is (571) 272-7698. The examiner can normally be reached on MON-FRI, FROM 8:30 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached on (571) 272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kimnhung Nguyen  
January 31, 2007



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